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DISEASES OF THE NERVOUS SYSTEM

A PRACTICAL JOURNAL ON PSYCHIATRY AND NEUROLOGY

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DISEASES of the NERVOUS SYSTEM

(PUBLISHED MONTHLY)

A PRACTICAL JOURNAL ON PSYCHIATRY AND NEUROLOGY

Psychosis in Addison's Disease*

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S. BERNARD WORTIS, M.D.
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Psychosis as a complication of Addison's disease of the adrenal cortex is rare and few cases have been reported in the past ten years. We describe here two such cases with observations on the relationship between their mental and physical patterns.

Because of the relative frequency of psychoses, it is possible that mental illness may be superimposed upon adrenal disease without direct linkage between the two. In Porot's case and one of ours there was a well formed paranoid psychosis, which manifested itself over a period of years when there was no clinical evidence of Addisonian crisis or other acute metabolic disturbance. However, in one of our patients, the hypoadrenalism antedated the paranoid condition by four years.

It seems likely that the profound metabolic disorder caused by hypofunction of the adrenal cortex affects the brain and other body tissues, and therefore, the individual's behavior. Chronic hypoglycemia, known to depress cerebral metabolism and to be associated with behavior disorder, was present in one of our cases, a girl who was delirious for over a month before her death. Imbalance of the blood electrolytes and deficiency in plasma volume are the usual laboratory findings in Addison's disease. These findings are also seen in some confusional states. Also known to depress cerebral function are the fall in basal metabolism, decrease in blood pressure and blood volume, and fall in body temperature, all of which are features of Addison's disease.

Often the victim of a chronic delibitating disease may utilize various psychological mechanisms in the production of a paranoid reaction. Divers diseases and injuries, ranging from simple fractures of the long bones to hypertensive cardiovascular disease with decompensation, have been seen as causes of a fixed paranoid psychosis. For example, a series of patients with heart failure who had different degrees of edema in the dependent portions of the body showed in their acute delirium a tendency to disown their edematous limbs, to interpret their "bursting" limb sensations as produced by other people in their environment, and some finally developed somatic delusions of mutilation, dismemberment, and incision.[2]

The delirious content in our patients was mainly paranoid, including ideas of imminent bodily harm, of being raped, or cut, or fear of being killed. Delusions of grandeur were expressed by one subject. Hallucinations were auditory, visual, and olfactory, as exemplified by one patient who stated that she saw God, heard her mother's voice, and

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smelled poison gas. The sensorium was, of course, clouded during the delirium, with defects in orientation and other critical faculties.

Unfortunately, in the records of these patients, the previous personality pattern was not reported adequately.

The following patients were seen at Bellevue Psychiatric Hospital:

(1) *IDIOPATHIC ADDISON'S DISEASE*

D. G., a 28 year old, single, Jewish girl, was transferred from another hospital[1] because of violent behavior, hallucinations and delusions of one week's duration. She had Addison's disease of unknown etiology.

The past history showed that she had been treated for recurrent Addisonian crises since the age of 21. These crises were usually precipitated by an upper respiratory infection, and were characterized by prostration and vomiting, and at these times her blood pressure fell below a recordable level. While in crisis, her blood sodium was 130 m. eq./1 (normal 320), her chlorides 491 mg./100 cc (normal 600), blood sugar 40-50 mg./100 cc, and total blood protein 9 grams/100 cc (normal 7).

The crises were treated successfully by means of infusions of sodium chloride and sugar solution and by adrenal cortical extract.

During eight years observation in the outpatient department of another hospital, she developed a gradual increase in pigmentation over the face, chest, and bucco-palatal mucosa. Melanin pigment was demonstrated in the urine. When not under adequate medical control, she complained of weakness and her blood chemistry was altered in the same direction as during the crisis, but to a lesser extent. Her menses disappeared for one year, the axillary and pubic hair gradually disappeared, and her thyroid became diffusely enlarged.

The patient's mother was described as a diabetic who became blind in 1944. Other details of the patient's family or previous history were non-contributory.

Laboratory findings: The basal metabolic rate remained at an average of —23%. Urine consistently contained albumin and red blood cells. The electro-cardiogram showed low voltage in the ventricular complex and a prolonged Q2 over a period of years. An electroencephalogram, taken two years after the onset of her illness, showed high voltage, slow bursts throughout the cortex. This abnormal pattern became worse on hyperventilation.[3]

For maintenance treatment she was given from one to sixteen grams daily of sodium chloride by mouth, and adrenal cortex extract injections. Later pellets of Doca were implanted sucutaneously. In December 1945, four months before her admission to the Bellevue Hospital psychiatric service at a time when her blood chemistry was normal, she had two momentary episodes of complete unresponsiveness, during which her pupils did not react, and a positive Babinski signs was elicited bilaterally. The electroencephalogram taken at that time was similar to the previous tracing, and intravenous glucose produced only a very slight alteration in the waves.

In January 1946, the patient was readmitted in crisis, and demonstrated abnormal behavior, occupying much of her time by writing invitations to her birthday party on paper towels. Although unmarried, she stated she was married to a man who had three businesses, that well-known dance bands would play at her birthday party, that President Roosevelt and others would be present, and that she would later go to Canada, Chicago and Miami. Actually a very modest birthday party had been planned for her.

By February, she became violent, and began to grimace and to have bizarre facial postures. She then became more confused. While still delirious, she received a pellet of Doca by subcutaneous implantation, and the following day her conduct became normal. It was noted that she recalled her delusions, and was "embarrassed." She wis discharged shortly thereafter, with her blood chemistry within normal limits.

During the succeeding month, the patient extruded her pellet, and developed new delusional symptoms. She stated that a friend

of her brother "worried" her, and made her lose 25 pounds; that she had cohabited with her father several times, and was pregnant. She said her parents were not her real parents, that she was talented as a child, and that her mother robbed her of her talents. She said that voices were speaking to her, that there was poison gas in the room, and that people with machine guns were pursuing her.

Her stream of talk was fragmented, illogical and inaccurate. The affect was one of fear. Her mental content included the belief that people said that she performed sexual perversions on women, that a "dumb teacher, a man named Jackie, gave me those pellets," that "people spice things on my mind." She was disoriented for time and place, but not for person. Her memory, retention and recall, and calculation were grossly defective.

Her course in the hospital was downhill despite all medication. She had fever, became comatose and died within a week after admission. Necropsy was refused.

(2) *ADDISON'S DISEASE WITH CALCIFICATION IN THE REGION OF BOTH ADRENALS*

S. K., a 61 year old Jewish housewife, was admitted to Bellevue Psychiatric Hospital in January 1945 because of violent behavior and paranoid delusions of five days duration.

Her past history disclosed that she was a known case of Addison's disease for over four years, with pigmentation, low blood pressure, low blood sodium and chlorides, and elevated potassium. X-ray of the abdomen showed calcification in the region of both adrenals.

Maintenance treatment consisted of percorten injections. Five days before admission, the patient developed an upper respiratory infection, stopped percorten treatment and shortly afterward began to act queerly.

On admission, physical examination and laboratory studies agreed with the findings noted above.

Psychiatric examination showed her to be alert and talkative. Her speech was circumstantial, detailed and she gave evasive answers to specific questions. At one time she said that she had heard the doctor say, "Throw her out," and subsequently plot with another man to rape her while she was asleep.

This patient was oriented, and showed a clear sensorium as regards time, place and person. Her retention and recall were within normal limits, as were her abilities at calculation and other sensorial faculties.

A tentative diagnosis of paranoid psychosis was made. She was considered to require further hospitalization, but on the insistence of her family was released to the custody of a son. Ten months later, the patient returned in a typical crisis of adrenal insufficiency and died within twenty-four hours of admission. Necropsy was refused.

Discussion:

In 1942, Chatagnon, Chatagnon and Raimbourg,[4] described a case of paranoid psychosis with Addison's disease. The patient, a 47 year old woman, whose menopause had its onset the year before, developed pigmentation, weakness and low blood pressure. Blood electrolytes were not reported. The patient was admitted in a state of acute anxiety, "believing that the proprietor of her hotel and a band of foreigners living therein held a grudge against her, and wished to kill her." She claimed to hear the baying of hounds and noise of machinery, and to smell odors of excrement and poison gas in her room.

Psychiatric examination revealed "depression, sadness, discouragement, difficulty in memory, slowness of ideation, childish reasoning, perseveration and stereotyped ideas, mannerisms of recrimination and opposition." Her physical and mental condition improved with sodium chloride therapy and she was discharged improved.

The authors reported that this case of paranoid psychosis with Addison's disease progressed favorably in both the physical and mental spheres because of the somatic therapy administered.

Larue,[5] in 1938, reported the case of a 33 year old woman who had had serofibrinous pleurisy twelve years previously, and who showed bronze pigmentation of the skin and low blood pressure. This patient was ad-

mitted after she attempted to leap from a window in the course of a "confusional syndrome" so severe that neither history nor physical examination could be done. On instituting treatment with sodium chloride, both her mental and physical status improved. She lost part of her pigmentation concomitant with an elevation in blood pressure toward the normal value. The one blood chloride determination made, was within normal limits.

In 1937, Porot[6] reported "a case of chronic psychosis masking Addison's disease, which received transient benefit from chlorides." The patient, a 33 year old woman, had left nurses' training school three years previously. She felt that people were hostile to her because she was in love with a young student. She shut herself up and spoke only at night. Before hospitalization, she became anxious, saw her young man on the ceiling, activately hallucinated, and finally attempted to kill herself. In the hospital, she said that men were on the ceiling and walls, sending electric shocks into her.

Her physical condition was diagnosed as Addison's disease. With sodium chloride therapy she improved physically and mentally, but her psychosis recurred, and she died soon thereafter.

Discussion:

The adrenal cortex has four principal functions: regulation of salt and water metabolism, pigment metabolism, elaboration of steroid sex hormones, and some aspects of carbohydrate metabolism.

Deficiency of adrenal cortex reduces the resorption of sodium and chloride and water in the renal tubules, while potassium is retained.[7] As a result of this deficiency, a fall in circulating plasma volume takes place, producing a shock-like syndrome in which there is low blood pressure, a fall in body temperature and in basal metabolism. At the same time potassium accumulates, showing its effect in toxic changes in the myocardium, in voluntary muscle, and possibly in the nervous system.[8]

The mental effects of insufficient cerebral circulation are well known. The toxic effect of potassium ions on the nervous system has also been the subject of investigation.[9] It is known that potassium potentiates the action of acetyl choline on the ganglion cells of the autonomic nervous system, and furthermore, stimulates the ganglion cells themselves. This potentiation of acetyl choline may take place in the central nervous system, where acetyl choline is directly related to electrical activity.[10]

The effect of a specific extract of adrenal cortex desoxycorticosterone acetate ("Doca") is to improve the resorption of sodium and chloride and water in the renal tubules. An excess of Doca may cause congestive failure with edema.[11] Currens and White[12] reported two cases of Addison's disease treated by Doca, who developed congestive heart failure. These authors state that "nervousness" was a leading symptom of the disease picture in these patients.

Pigment metabolism is poorly understood.

A relationship between steroid hormone production by the adrenal and psychomotor activity has been implied by Pincus and Hoagland.[13] These observers found a high degree of correlation between the conservation of 17 ketosteroids and efficiency in flying. A group of pilots were rated as to their efficiency both by their commanding officers and by means of a quantitative test (pursuit meter). Those men with the lowest urinary excretion of 17 ketosteroids received the highest efficiency ratings. Fatigueability was also correlated with the excretion of this substance in a carefully controlled experiment. These investigators found that delta five pregnenelone (chemically related closely to corticosterone and ketosteroids) when given orally, improved the efficiency and endurance of their subjects, some men reporting less subjective fatigue and an increase in enthusiasm for their work.

The principal carbohydrate functions of the adrenal cortex according to Loeb, Thorn, and others, include the absorption of dextrose from the gastro-intestinal tract, and the ability to carry on glyconeogenesis, or the production of carbohydrates from proteins. Furthermore, a deficiency of adrenal cortex hormones will cause carbohydrates to be burned more readily, which lowers the

threshold for the appearance of hypoglycemic symptoms. Hypoglycemia is known to produce severe and far reaching effects on the behavior and total personality of the patient, including such symptoms and anxiety, neurasthenia, violent behavior, and convulsions. The full range of hypoglycemic symptoms is seen in insulin shock, whether in adenomatosis of the pancreas, the treatment of some psychoses, or an overdose of insulin in a diabetic.[14, 15, 16, 17]

Studies of brain metabolism indicate that the brain oxidizes glucose principally, but that it is capable of oxidizing other carbohydrates in small quantities. Brain tissue can also oxidize non-carbohydrate substances such as lactic and pyruvic acids; however, lactate and pyruvate are less effective in maintaining brain metabolism than is glucose. In view of the accumulated experimental data, it is clear that adequate blood sugar and brain glucose play an important role in sustaining normal brain metabolism.

The blood sugar level is kept in neuroendocrine balance by the sympathetic-adrenal system, the parasympathetic insulin system, the anterior pituitary, the adrenal cortex, ovary and thyroid, and the posterior pituitary. Brain substance intrinsically possesses the ability to oxidize carbohydrates in amounts adequate to its needs; these agencies help to maintain blood sugar balance. During a short period of hypoglycemia, glucose may be liberated from glycogen which has been stored in the brain, while the liver may release carbohydrates which it has stored, and other organs metabolise fat instead of sugar. In prolonged hypoglycemia, it has been observed that the metabolic rate of the brain falls to nearly one-quarter of its resting value.

Because adrenal cortical disease profoundly disturbs the metabolism of carbohydrate, sodium, water, chloride, potassium, pigment and steroids, it is possible that the physiologic aspect of the psychotic process we have seen, result from impairment of the metabolic functions of the brain.

SUMMARY

Two new cases of psychosis in Addison's disease are reported along with three cases which have been reported previously in French literature. A characteristic delirium is described, and the pathophysiology and some of the related psychopathology are considered.

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Aldarsone and Neurosyphilis

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Aldarsone is a pentavalent arsenical compound which has been found to have marked protozoacidal properties[1] and yet to be reasonably safe for use in treatment of human illness. Pentavalent arsenicals have been found particularly useful in treatment of neurosyphilis because of their power of penetration into the nervous system. It is chiefly this property that makes such substances of interest to clinicians. Previous reports[2,4,5] indicate that aldarsone is useful in the treatment of neurosyphilis. The report of Bennett[2] indicates that there may be some danger in the use of this substance, particularly for the optic nerve. It is to be noted, however, that the treatment schedule which he followed was usually intense and did not include any preliminary precaution to avoid such complications.

This report deals with the use of aldarsone in approximately 130 patients suffering from neurosyphilis, practically all in the dementia paralytica group. The drug was in most instances used in conjunction with fever therapy and bismuth compounds in the same manner that other arsenical drugs have been used in our clinic. We have a series of some 1,500 patients treated for neurosyphilis by various techniques which serves as a control for comparison of results.[3]

Patients are usually not started on treatment with any arsenical compound because it is felt that the danger to the optic nerve is very much increased if the vigorous effects of arsenicals are allowed free play early in the course of treatment. It is likely, we believe, that the acute effect on the optic nerve is a form of therapeutic shock analogous to the Herxheimer reaction. A small group of advanced, "hopeless" cases has been treated initially with aldarsone, however, with no unusually adverse effect.

Technique

After a period of treatment with a soluble bismuth compound, treatment with fever (which is produced by electro-magnetic induction in conjunction with insulated blankets) is started. Three-hour periods of fever of 105° and over are produced three times weekly to a total of twelve periods. There is no attempt to give the bismuth or other chemotherapy at the same time fever is produced. The treatment is merely carried on concurrently. After the first course of soluble bismuth, arsenical compounds are introduced. This is usually in the middle of the course of fever treatment. In most of the patients a series of 20 aldarsone injections at weekly intervals was given, each injection following the first consisting of 1.0 gram in 10 cc of distilled water. The first injection given was usually 0.5 gram in 5 cc of distilled water. A special series of patients was given more intense treatment with aldarsone without preliminary use of bismuth. In these patients 1 gram was injected twice weekly up to 30 injections in the first series of treatments. Following this preliminary intense treatment, routine treatment was followed as for the other patients. Table III indicates the important facts regarding the number of patients, injections, etc.

Results

The total series of patients has been divided into three groups, an original group which has been followed for more than two years, a subsequent group which has been followed for varying intervals, including patients fairly recently treated, and the third group which was given more intensive treatment as mentioned.

The original group of 58 patients was given aldersone in the manner outlined, in conjunction with fever and bismuth. The outstanding clinical observation in this group as well as in the others was the total absence of any toxic effect of aldarsone either immediately or late following its injection. There was no instance in which changes in the optic nerve were found to follow the

TABLE I

GROUP I.—PATIENTS FOLLOWED FOR 2 YEARS OR MORE

No. of injections	0-10	10-20	20-40	40-60	Over 60	
No. of patients	6	5	10	10	27	Total 58 Patients

SEROLOGY	BLOOD	SPINAL
No. patients positive at beginning of Rx	35	34
No. patients positive after 6 mos. of Rx	33	35
No. patients positive after 12 mos. of Rx	34	31
No. patients positive after 24 mos. of Rx	31	28

Only patients having all 4 tests are included.

RESULTS

Patients on Trial Visit		
Before 6 mos. of Rx	12	
6 mos. to 12 mos. of Rx	4	
12 mos. to 24 mos. of Rx	3	
		20*
Patients Remaining in Hospital		
Out and working	3	
Not out but working	17	
Improved	7	
Unimproved	3	
		30
*Deaths**		
Before 6 mos. of Rx	3	
6 mos. to 12 mos. of Rx	3	
12 mos. to 24 mos. of Rx	1	
24 mos. of Rx	1	
		8
Total Patients		58

*3 others were allowed on trial visit but returned to the hospital.

CAUSES OF DEATH

A.E.	Dementia paralytica
B.J.	Cerebral hemorrhage; dementia paralytica
J.W.	Carcinoma of face; metastases; bronchopneumonia; hypertensive cardiovascular disease; dementia paralytica
E.F.	Generalized peritonitis
M.H.	Staphylococcus septimecia; septic parotitis; dementia paralytica
H.M.	No cause determined; multiple diverticuli of esophagus; acute bronchitis
S.S.	Lobular pneumonia; dementia paralytica
S.H.	Dementia paralytica

TABLE II

GROUP II.—PATIENTS FOLLOWED FOR LESS THAN 2 YEARS

Total number of patients	67
Total number of aldarsone injections	2557
Average of injections per patient	38.3
Patients on Trial Visit	
Before 6 mos. of Rx	4
6 mos. to 12 mos. of Rx	7
12 mos. to 24 mos. of Rx	2
24 mos. of Rx	3
Total	*16
Deaths	
Before 6 mos. of Rx	4
6 mos. to 12 mos. of Rx	3
12 mos. to 24 mos. of Rx	2
24 mos. of Rx	1
Total	*10

*Incomplete figures since the entire group had not finished 2 years of treatment.

TABLE III

SPECIAL GROUP (INTENSE INITIAL TREATMENT)

Total number of patients 10

	No. of inj. aldarsone	No. of fever treatments	No. of inj. bismuth	RESULTS
M.T.	70	12	40	Improved, in hospital
C.C.	30	12	40	Improved, in hospital
M.P.	27	12	2	Discharged improved
A.P.	50	16	31	Died (Paresis)
I.M.	60	12	27	Discharged improved
W.V.	63	12	32	Discharged improved
N.R.	57	12	27	Discharged improved
J.M.	50	12	40	Improved, in hospital
E.R.	30	12	32	Discharged improved
L.W.	41	12	20	Improved, in hospital

treatment with aldarsone. There were no nitritoid crises and no skin eruptions from the use of this drug.

Serologic reversal with this drug as with all others in patients with advanced dementia paralytica is very slow to be achieved. The reduction of spinal fluid protein and cell count to normal levels, however, occurs very rapidly, within two or three months following the beginning of the treatment. Table I indicates the serologic results at periods of 6, 12 and 24 months following the beginning of treatment. These results compare favorably with observations made on the use of tryparsamide and mapharsen in large groups of patients treated by similar technique.

Tables I, II and III indicate the number of patients released from the hospital on trial visit or discharged at varying periods following treatment. These results also compare favorably with those following other drugs used in a similar manner.

The death rate as it appears in the tables can be considered a clear index of the relative safety of this drug in the treatment of neurosyphilis, since the rate is somewhat lower than the average in groups treated with other drugs. Table I, indicating the status of the patients remaining in the hospital, shows that the total results are excellent if the good in-patients are properly credited in the results.

The results in a somewhat larger later group accumulated after the first 2½ years of the use of aldarsone completely corroborate the safety of the drug in treatment, since no complications involving the optic nerve were found and no serious complications of any description were encountered. Only one patient felt somewhat nauseated after the injection and this patient suffered similarly following every other type of drug which was used. The crude death rate in the latter group is as favorable as that in the more completely studied group and indications are that the results in number of patients improved and recovered have not become less favorable. (Table II.)

Ten patients who were given more intense treatment are considered in Table III. Several of these patients were in extremely bad condition when the treatment was started and were considered unfavorable for fever treatment. It was only after the first course of aldarsone was finished or nearly finished that fever treatment could be carried out in these individuals. In spite of their rather unfavorable beginnings the members of this group showed a remarkably low death rate. The safety of this drug is certainly attested by the fact that there were no ocular complications when patients who were practically moribund were subjected to intensified treatment with the drug.

Summary

A group of typical state hospital patients suffering from dementia paralytica was treated with aldarsone in conjunction with fever and bismuth as described. The patients were all examples of far advanced paresis whose outlook could not be considered favorable. The drug was found to be practically free from toxic secondary effects and apparently caused no ocular complications when used as described. The outcome of treatment in the patients was at least as good and probably somewhat better than in patients treated with other drugs used in the same routine with fever and bismuth. It is believed that aldarsone represents a distinct addition to the chemo-therapeutic armanentarium for use in neurosyphilis.

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Principles of Rehabilitation of Neuropsychiatric Veterans

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To discuss with any degree of intelligence the principles of rehabilitation of the neuropsychiatric veterans, it is imperative

1. To recall the lessons learned from the similar situation following the World War I.
2. To analyze the more important contributions in the field of neuropsychiatry during the interval between the two wars,
3. To examine the changes occurring in the personality of the veteran at the time of induction into, and separation from military service,
4. To point out the precipitating factors of the neuropsychiatric disorders occurring while in military service,
5. To call attention to factors of ethnic, cultural, religious, social and economic nature that modify the character of the environment to which the veterans return.

Following the first world war neuropsychiatric casualties comprised the largest number of all disabilities incurred in military service,[1,2,3] and presented the greatest problem in treatment and rehabilitation. With passage of time, increasing numbers of neuropsychiatric disabilities presented themselves for treatment, so that in a few years the hospital beds for neuropsychiatric patients comprised the largest number in the veterans' hospitals. In 1919 we were just beginning to understand the psychological mechanisms underlying behavior disorders.[4,5,6,7] With the meager knowledge at our disposal, we attributed neurotic reactions to a conflict between the instinct for self-preservation on the one hand and the duties and responsibilities to the country—patriotism, on the other.

Hospitals and out-patient clinics were created by the Veterans Service to treat these patients. Efforts were exerted to have clinics situated within large communities. However, neuropsychiatric hospitals were built in rural areas, away from medical centers, and often a considerable distance from the more populated neighborhoods which contributed the largest numbers of patients. It was attempted to give the veteran real vocational training but, unfortunately, many of the vocational schools were deficient both as to type of instruction and quality of instructors. Furthermore, many veterans were given training in work for which they were not qualified. Moreover, the factor of compensation not infrequently interfered with vocational training, and in many instances tended to prolong the duration of disability. Despite these handicaps, a large number of veterans were rehabilitated to the extent of resuming a useful place in the community.

Directly after the World War I psychiatry was emerging from a descriptive to an interpretive stage. Psychoanalysis was still in its infancy, and psychobiology was just being formulated. Medical psychologists concerned themselves only with psychometric testing. Pneumoencephalography was being developed and its usefulness in neurology was beginning to be appreciated. Electroencephalography was yet unknown and it would often take months to establish the diagnosis of epilepsy in the more difficult cases. Spinal manometric studies were just being initiated. Neurosurgery was still an infant, though a robust one, in the medical specialties. The shock-therapies were yet to be discovered, and group psychotherapy was unknown. Neuropathology was beginning to emerge as a most valuable basic scientific discipline in the understanding of neurological, neurosurgical and some neuropsychiatric problems. Neurophysiology was discussed by a few progressive workers. Psychiatric social service workers were gaining recognition. Child guidance clinics were being organized. Special attention was given to child psychiatry, and the direction of scientific research at that time was one of gaining an understanding of human conduct and an appreciation of instinctual and emotional drives and urges in influencing human behavior.

The personality of the inductee undergoes considerable change as he leaves civilian life

and enters military service.[8] The essence of military teaching is to train the individual to function as a member of a military unit in blind obedience to the commander, despite all personal danger. In the normal peace time life, the child develops his personality at home under parental guidance. At birth, the child is like a little cannibal, full of instincts and urges, free from inhibitions and restrictions, having all his wants gratified by his parents, particularly his mother. With growth and development, he looks to his parents for guidance, security and protection against unknown reality situations. With further training and guidance, he learns to satisfy his instinctual urges and desires only at certain times and in certain ways, according to the standards set in the home environment. The parental authority imposes certain restrictions and inhibitions which may at first arouse aggressive impulses toward the parents, but which he soon learns to suppress because of fear of losing the love of the parents, and because of fear of punishment. He learns to internalize the parental power of prohibition and restriction and becomes a civilized member of his group.

The internalization of parental guidance, prohibitions and restrictions is the basis of the formation of the superego. This superego, or the internalized parents, guides the ego in its reactions to the conflicts between instinctual drives and environmental situations. The superego helps the ego to test reality and to act in a manner conducive to the best interest of the individual. Under guidance of the parents, the child acquires ethical standards and moral codes of the type of civilization in which he lives. The superego represents the internalized parental authority and guidance. The superego enables the ego, in a democracy, at least, to explore and to test reality situations in the immediate environment, to suppress any anti-social and aggressive traits, to sublimate instinctual drives along socially approved channels, and to become an acceptable member of his community. The collective character of the community reflects its particular stage of civilization. The character of the nation comprises the collective character of the many communities. In a democracy, the superego enables the ego to form an Ego-Ideal, that which he would like to be, by taking advantage of the opportunities offered to each citizen. Ethical and moral conduct is the ultimate aim of a member of a democracy, where authority is vested in duly elected officials, in accordance with the ego-ideals of the voters.

In military life, the individual is trained to function as a member of a unit in blind obedience to its commander, despite all personal danger. The service man is put in the same emotional position as was the child before the development of the superego, at the time when the parents represented guidance, security and protection against environmental danger. The service man is bound by libidinous ties to the other members of his military unit, and his superego functioning is surrendered to the commander of the military unit. On his separation from military service, the veteran must resume his own superego-functioning, and this is embodied in the principles of reconditioning the soldiers to civilian life during the period which they spend in separation centers. Upon returning to civilian life, he is obliged to resume functioning on an adult level, guided by his own superego, and acting in a manner most conducive to the gratification of his own needs, but in a manner approved by society.

In analyzing the precipitating factors of psychiatric casualties, one is impressed with the fact that poor morale, poor leadership, and loss of members of the military unit played important roles.[9,10] On entering military service, the man is taught the basic principles of military behavior. He is "indoctrinated" with certain ideas, such as understanding the causes that led to the war, the danger to himself, his family and his country by the enemy, and the need for his contribution to the success of the conflict. In this process the utilization of personal motivating factors is an indispensable prerequisite of proper morale. He is given to understand that he is fighting for his own life and liberty, for the lives and freedom of his family, and for the preservation of his country. He is taught that the only way to

achieve victory is by the cooperative effort of the members of his unit and blind obedience to its leader. Poor indoctrination lessens the efficiency of the service man. A very important precipitating factor is the real or imaginary mistreatment by a superior officer. Actual or suspected discrimination by a superior officer, because of race or religion, failure to obtain merited promotion, or failure of assignment to a desired task, may precipitate neurotic and even psychotic reactions. The soldier loses faith and confidence in, or more technically, love and affection of the superior officer, the father surrogate or the externalized superego, and his behavior resembles that of a child who has lost the love and affection of his father. The death of a competent superior officer may have a similar effect. The loss of a close member of the military unit may precipitate a neurotic reaction. Thus, a disturbance in the superego-ego relationship tends to precipitate neuropsychiatric disorders.

On returning to civilian life, the neuropsychiatric veteran may encounter environmental situations that may prolong his disability. Personal and marital problems, securing employment, finding living quarters, and changes in family relationships may make adjustment somewhat difficult. In leaving the military unit, he may miss strong libidinous attachments which he cannot replace in civilian life. He may find himself a member of a group experiencing economic or social barriers. He may look upon group struggles as a menacing situation. He may seek security as a substitute for the externalized superego, and may become a member of one of the many pressure groups. These social and economic environmental problems may delay recovery.

The objective of a rehabilitation program is to restore the individualism to normal functioning by means of expert treatment and training. The problem at the present time is qualitatively identical with, though quantitatively different from, what it was after the first world war. The longer duration of the World War II, the greater number of service men and the larger number of casualties,[11,12] the greater variation in the age of the service men, and the greater number of etiological and precipitating factors of neuropsychiatric casualties in the last war make the subject of rehabilitation a more difficult one.[13,14,15] However, neuropsychiatrists today are equipped with diagnostic and therapeutic measures that were unknown twenty-five years ago and therefore better results are expected.[16,17,18] Pneumoencephalography, electroencephalograpy, myelography, electromyography, and skull radiography are most valuable diagnostic adjuvants in the appraisal of purely neurological and neurosurgical disorders. Psychoanalytic principles have been systematically formulated and there are a relatively large number of psychiatrists who have gained a working knowledge of the theory and practice of psychoanalysis. Psychosomatic medicine, stemming from psychoanalysis, has made the latter an acceptable and approved procedure. The growth and development of psychobiology likewise enhanced the therapeutic efficiency of psychiatrists. Group psychotherapy is being widely and favorably employed. The various forms of shock therapy have almost revolutionized the treatment of many of the psychoses. Fever therapy and penicillin are producing amazing results in the treatment of neurosyphilis. Narcotherapy and hypnosis are now again receiving scientific interest, stimulated by the gratifying results obtained in treating many neurotic reactions near the scene of combat. Medical psychology affords us an appraisal of the degree of native intelligence,[19] the presence of special aptitudes and abilities, and the quality and quantity of emotional maturity. Of course, we are encountering a group of neuropsychiatric disorders resulting from malaria and from the more obscure tropical diseases with which we have had little experience. But we are fortunate that numerous students in tropical medicine have acquired knowledge and experience in treating these conditions and will teach their colleagues how to recognize and to manage these diseases.

Neurosurgical casualties have received prompt, effective, and scientific care and treatment, thanks to the organization of

neurosurgical teams and wards, and to the speedy transportation to properly equipped neurosurgical centers. The sulfa drugs, plasma, and penicillin have saved many neurosurgical cases. Peripheral nerve and spinal cord injuries have been most effectively handled due to knowledge gained in the interval between the two world wars. The saving of a great number of these patients, plus the larger number of men in service, have produced more neurosurgically disabled veterans. Because of the great variation in the ages of the service men, purely neurological disabilities have been detected.[20] Inflammatory disorders of the nervous system, particularly those of a virus nature, multiple sclerosis, myopathies and even amyotrophic lateral sclerosis have been encountered. The problem of treating the purely neurological and neurosurgical disabilities is one of adequate hospitalization in properly equipped hospitals staffed by trained and experienced neurologists and neurosurgeons. It is gratifying to note that the medical services of the Veterans Administration have recognized this fact, and plans have been formulated for the erection of properly equipped hospitals situated in large cities, staffed by competent neurologists and surgeons, and affiliated with neurological and neurosurgical centers. With the aid of properly trained and experienced medical psychologists, physiotherapists and vocational counsellors, it is reasonable to expect that a large number of these patients will be rehabilitated to the extent of being self-reliant and useful citizens.

The reconditioning program instituted by several of the military services in hospital and in convalescent centers have already produced commendable results in rehabilitation. The lessons learned from these experiences will be utilized in the rehabilitation program of the veterans service.

The psychiatric disorders present more serious problems.[21, 22, 23] The shortage of hospital beds and out-patient departments for psychiatric patients is a matter of much concern. This has been somewhat mitigated by the voluntary responses of many neuropsychiatrists who have opened clinics in hospitals and in neuropsychiatric institutes, where many neuropsychiatric veterans are already receiving active treatment. The Veterans Administration has drawn plans for the erection of psychiatric hospitals and out-patient departments in large cities and have appointed to their visiting staffs psychiatrists of experience and standing, many of whom are attached to medical schools and neuropsychiatric centers. With increasing facilities in personnel and a sustained interest in the rehabilitation of these veterans, we should expect far more promising results than were obtained twenty-five years ago.

We are now faced with an increasing number of psychotic veterans. Some of them present actual schizophrenic and manic depressive reactions similar to those encountered in civilian life. Others, however, present psychotic reactions that only resemble the cyclothymic or schizophrenic reaction patterns, and carry with them a more favorable prognosis. Physicians treating these patients advised caution in making early diagnoses and prognoses in these psychotics, for in many cases these seemingly malignant reactions may clear up spontaneously and completely. The marked depressions, anxiety states, obsessive trends, delusions, hallucinations, manifest hostility and aggressive trends, or mutism, negativism and catatonic like reactions, seem to clear up within a few months after hospitalization. Often an analysis of their pre-psychotic personality helps to arrive at a correct diagnosis. The patients with a history of sullenness, undue aggression, irritability and moody states during childhood and adolescence are not apt to clear as readily as those whose personalities have been described as of a frank and open character, who have made and kept friends, and who have been able to get along well in their environment. A reasonably large number of these cases seem to respond without receiving any of the modern forms of therapy, and many react favorably to the various forms of psychotherapy. The method of treatment to be given to these patients is one for the trained and experienced psychiatrist to decide. Of course, the indispensable prerequisite in the management of the psychotic patient is adequate hospital care under trained and ex-

perienced psychiatrists, and the utilization of all forms of psychotherapy, as well as physical or chemical therapy, no matter by what name they may be designated.

The neurotic patients will likewise require expert psychotherapy at the hands of a well trained and experienced psychiatrist. The results of such treatment are not always as readily discernible as after some surgical procedure. It may take months and even years to appreciate fully the results of psychiatric treatment and certainly training and experience are indispensable prerequisites for a psychiatrist in the successful management of these patients. The neurotic will have to re-integrate his entire personality in his adjustment to civilian life. Once again he will have to learn to meet the problems of his immediate environment on his own assets and liabilities. In the psychiatrist he will once more, psychologically speaking, find his father surrogate, who will guide him through the various strains and tensions that may be manifestations of his neurotic behavior, and who will teach him how to face and overcome them. Once again he will be taught to establish his own superego, his own means of meeting his instinctual aims and desires in accordance with the demands of society and the requirements of his own personal needs. This was the essence of the policy instituted in the reconditioning centers of the army, their objective being to inculcate into these mentally sick soldiers a spirit of self-reliance and self-dependence and to aid them in finding adequate solutions to their immediate problems. This is the theme of the successful rehabilitation of the neurotic soldier.

The immediate demand for adjustment on the part of the returning neuropsychiatric veteran is to gain an acceptable position in his own immediate family circle. The youngster of yesterday is the man of today, matured far beyond his chronological age, and developed by trying experiences which he never would have had in civilian life. He is returning to an environment which also has undergone perceptible changes. Parents may still regard the returned veteran as the young boy who needs supervision and guidance, failing to recognize that he has developed far beyond their calculations. It is, therefore, imperative to treat not only the veteran, but the parents as well, and the best method is through frank discussions, either individually or preferably in groups, pointing out the subtle but definite changes that have occurred in their sons and the best method of meeting these changes.

If married, the neuropsychiatric veteran will certainly require adjustment to his wife and often to his children. The wife may not always understand the handicap under which her husband is laboring. They may expect too much of each other, expectations which cannot be fully materialized. The years of separation may have cooled the ardor that was present when they first married. Attitudes may have changed, and different and often conflicting viewpoints may have been acquired during the period of separation. Occasionally small but irritating situations may cause a rift between husband and wife, or may add to an already existing one. These must be mutually understood and harmonized in order to continue the marriage. Under the guidance of the trained and experienced psychiatrist, in cooperation with the clinical psychologist and the psychiatric social service worker, readjustment can often be effected and the marriage saved. The organization of clubs for the wives of the veterans is a practical and feasible means of imparting valuable knowledge of the simple rules of mental hygiene. Discussions, lectures and personal interviews will help the wife understand the handicaps under which her husband is laboring and enable her to make a more satisfactory adjustment in her relationship to her sick husband.

Housing is an urgent problem that faces the veteran and one that causes considerable emotional disturbance, and often tends to prolong his psychiatric disability. Many veterans have been obliged to make their homes with in-laws in crowded and often emotionally disturbing settings. This is a real and immediate problem which will have to be faced realistically. The psychiatrist is in the best position to help allay anxieties and emotional disturbances associated with this phase of adjustment.

The young veterans have been deprived of

education during a period of their lives best suited to obtain it. A debt of gratitude is due to the authorities of the many universities who have so willingly opened their doors to the veterans who seek an education. It must be recognized that the educational facilities are being strained to the breaking point. Erection of living quarters and the addition of new buildings to the schools and colleges entail an economic burden and it is the responsibility of the government to furnish the necessary funds. Many courses are now being given to service men in the various zones of occupation. Furthermore, a few former army camps have been organized as educational centers. We have now a valuable array of psychological tests for the evaluation of the intellectual level and the aptitude of the young veterans to guide them in the selection of the careers that they should pursue.

In vocational training, we are again faced with the problem of adequate training in the type of work for which the veteran is best suited and qualified. Following the first world war there were instances too numerous to mention in which the vocational schools were poorly equipped and the instructors hardly qualified to teach their subjects. Vocational training should be given by qualified men, preferably by university connected personnel, and carefully and periodically supervised by competent authority. One cannot emphasize too strongly the importance of guiding the veteran in the selection of a vocation and where he may obtain training in it. The utilization of various tests for vocational guidance and the employment of special aptitude tests must be fully carried out before the veteran is finally put into training in a particular vocation. In this the cooperation of the clinical psychologist will be most helpful.

The veteran must, of course, have money to subsist while receiving an education and while obtaining vocational training. The economic aspect of rehabilitation has received favorable attention on the part of the government agencies. The G.I. Bill of Rights provides monetary grants to men in training, furnishing them not only instruction, books and tools, but also money for their daily subsistence. It is, therefore, imperative for the neuropsychiatrist to cooperate with the clinical psychologist[19] and with the psychiatric social service worker[18] in obtaining the proper training in the most suitable school for the neuropsychiatric veteran. Following the World War I, there were too many instances in which veterans were shifted from one course of training to another, only to find themselves at the end of their allotted time without any real training in any vocation.

The question of compensation has received much attention. It is the policy of our government to provide a disabled veteran with funds to help him overcome in a measure the handicaps resulting from his disability. In one sense, there can be no real compensation for disability. Nevertheless, the money is of considerable help. Too often have we heard that compensation itself causes chronicity of the disability. It has been claimed that the veteran will never get well while he is receiving compensation, and therefore, a policy of giving a lump sum of money to disabled veterans when they are discharged from service or from a hospital has been advocated. Psychologically, compensation implies to many neuropsychiatric veterans an expression of tenderness and protection by his government whom he regards as a fusion of mother and father and a source for continued love, affection and protection. It is not at all uncommon to notice acute emotional disturbances caused in neurotic patients upon receiving a notice of a cut in compensation. It is not so much the deprivation of a small sum of money that is responsible for this disturbance, as it is a narcissistic blow caused by what they consider a slight on the part of the government. To them it implies lessened surrogate parental care and affection, creating a feeling of insecurity and consequent anxiety. The reaction of the neuropsychiatric veteran to a cut in compensation may be used as an index of the progress made in therapy. Those veterans who have received adequate psychiatric care and are thus enabled to regain their former superego, or ego ideal, do not react with anxiety to reduction in compensation. The suggestion of granting a lump

sum benefit for disability at the time of discharge is not practical for it would be foolhardy to put a substantial sum in the hands of a neurotically sick person and expect him to put it to good use. The reaction of the neuropsychiatric veteran to the subject of compensation is part of his general reaction to all other situations. The psychiatrist must guide neuropsychiatric veterans in the proper adjustment to this problem.

The procurement of employment for the older veterans is also a very important step in proper rehabilitation. A satisfying job carries with it emotional gratification and ego enhancement far beyond the mere securing of a good salary. It is, therefore, important to invoke the aid of federal and state employment agencies in securing proper jobs for the older neuropsychiatric veterans. In this situation also the aid of the clinical psychologist and the psychiatric social service worker will prove most desirable.

The social adaptation of the neurotic patient is rarely discussed, yet it is of great importance in the rehabilitation program. In military service, the man risked his life to help preserve his country. He has had ideas and ideals inculcated in him in his basic training. He followed lines of discipline and obeyed the orders of his superiors. He has made sacrifices, the nature and extent of which he often first realizes after he is discharged. Returning to civilian life, he is faced with a group of people who have been living comfortably earning good salaries and risking little or nothing. He begins to re-evaluate standards of moral and ethical codes. He has given the best that was in him for these civilians. What have they been doing for him? What may he possibly expect from them? What opportunities are offered to him? Where are his former business and vocational opportunities? He may find his job held, or his office occupied, by civilians who never saw service. He finds it impossible to secure necessary material and supplies to carry on his business or vocation. The cost of living has skyrocketed. He cannot understand why there are so many strikes and why strife exists between labor and management. He may encounter bias and prejudice in obtaining social or economic security. These social problems may re-awaken anxiety. It is a recognized fact that following every war discontent and restlessness ensue—a fertile soil for extreme social change, not always in the best interests of the greatest number. It is in this post-war turmoil that dictators flourish. Self-seeking and selfish people may often assume leadership of discontented groups and dictatorship may be the consequence. Numerous neurotic veterans are found among the followers of these dictators. Hence, there is a great need to re-orient the neurotic veteran in recognition of social and psychological trends that are bound to run through society at this critical period and to point out to him the lessons learned from past experiences. It is imperative that leadership of the various veterans organizations fall into the hands of stable people with a broad social outlook, who will direct the energies of the members along channels leading to a life of happiness and gratification.

Rehabilitation, no matter how efficient in the restoration of the neuropsychiatric veteran to the best degree of usefulness, would be futile if we were to disregard the consideration of the institution of measures to avert a third world war. This is a subject that concerns everybody, veteran or civilian, ill or sound. Wars are manifestations of psychotic reactions on the part of groups, generally in response to the exhortation of short-sighted and selfish leaders. This is really a psychiatric problem. In the past, statesmen, theologians and economists have attempted to set up a method of averting war but with little success. The time is now ripe for psychiatrists to offer suggestions for preventing another world conflagration. It is not unreasonable to suppose that had Chamberlain taken with him a psychiatrist when meeting with Hitler, there would not have been a Munich, for the psychiatrist would have recognized Hitler's psychopathic personality—and no one wants "to do business" with a mad man! One of the causes of the last war was that the events of 25 years previous were so quickly forgotten; seemingly, an effort was made to forget them. The world betrayed those who sleep

in Flanders fields.[24] Today, while peace treaties with our enemies have not yet been signed, the possibility of achieving a lasting peace seems to be more remote than it was after the cessation of hostilities a year ago.[25] We are even talking of a possible struggle with one of our allies. The hopes for international peace and good will aroused by the creation of the United Nations Organization seem to have been somewhat dampened by the events of the past year. With the dangers of the atomic bomb so greatly emphasized, we overlook that the real danger lies in how it will be used. Until the United Nations will be invested with adequate power to prevent armed conflict, we must find psychological ways to avert further international disputes leading to war. A realistic plan to avert World War III may be formulated as follows:

(1) Every effort should be made to keep fresh the memories of the fighting just ended. The Nazi brutalities, the Japanese treacheries and the Fascist cruelties must not be forgotten and should be brought to the attention of those who were too young to understand them at the time of their occurrence.

(2) A national holiday should be set aside and designated as "Deliverance Day"—deliverance from actual and threatened slavery by the degenerate aggressors. It should be celebrated with appropriate ceremonies in schools, colleges, civic centers, churches and social and community centers. The deeds of the heroes and leaders of the war should be repeated over and over again, and the words and utterances of the leaders of democracy constantly brought before the public.

(3) We should maintain an adequately equipped and trained army, navy and air force in order to prevent recurrence of the national helplessness that prevailed at the time of Pearl Harbor.[26, 27]

(4) Courses should be given in colleges and universities dealing with the factors that led up to the last World War. The various social, economic and political trends and particularly the influence of leaders of the various countries should be carefully discussed and evaluated. Attention should be called to the high morale of the democracies during the war, despite great handicaps. We should analyze the factors contributing to our war effort and the unity that prevailed.

(5) Every effort should be made to recapture and maintain the spirit of unity that existed during the war, and it should be applied in making the United Nations Organization a realistic and effective weapon in the prevention of war. This can be accomplished only by a frank and honest presentation of all facts concerning controversial subjects causing dissension among the allies. The public must be told the truth about the Franco regime in Spain, the Iranian dispute, the political situation in Greece, the civil war in China, the Palestinian problem, and similar situations which have caused a rift amongst the allies. If the people are told the truth and are given the facts, they will elect the proper leaders capable of solving them.[28]

(6) We must recapture and maintain the spirit of American unity that prevailed during the war. Labor-management disputes must receive impartial and careful study and solution. Racial, religious, economic, social and industrial conflicts must be squarely faced and resolved. Bigotry[29] and prejudice in any form must be combatted.[30, 31] This may be achieved only by the active participation of every citizen in the political life of his community and by election to public office of able and qualified men. We must carefully examine and analyze the various forces that have caused disunity amongst our people in the years intervening between the two wars and we must institute measures to prevent their recurrence.

SUMMARY

(1) Rehabilitation means the restoration of the neuropsychiatric disabled veteran to as nearly normal function as possible.

(2) All known scientific methods must be utilized in the rehabilitation process.

(3) The combined efforts of psychiatrists, psychologists and psychiatric social service workers must be employed in this program.

(4) Adequate hospital and out-patient department facilities must be provided and maintained in large communities.

(5) Environmental factors must be manipulated to suit the need of the veterans.

(6) A plan is offered to prevent the recurrence of world wars.

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AUTHOR'S NOTE: The material in this article is based on experiences in World War I at the U. S. Veterans' Hospital No. 81, and on recent observation of cases at the Veterans' Rehabilitation clinic at the Jewish Hospital, Brooklyn, N. Y.

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Neurological Clinical Pathological Conference

of the

Cincinnati General Hospital

MILTON ROSENBAUM, M.D., *Editor*

CASE NO. N-46-33

PRESENTATION

The patient, a 45 year-old white woman, was admitted to the Cincinnati General Hospital on October 15, 1945 in deep stupor. The history as obtained from the husband was that she had first complained of generalized weakness the day before. At 2:30 p.m. on the day of admission, while sitting at dinner she suddenly threw her arms over her head, grimaced as if to scream, hyperextended her head and had a series of five to six generalized convulsions of a clonic type, each lasting 1-2 minutes. At the completion of the convulsions she evacuated her bowels and bladder and was quite cyanotic. She was still stuporous when brought to the receiving ward two hours later. She vomited food several times.

Review of the past medical history revealed that the patient had been hypertensive for two-three years. She had had a "stroke" in January, 1945, during which she was not comatose and from which she recovered her facial symmetry, but the left arm remained limp at her side and her gait was altered. Members of the family stated that she had complained of not being able to feel properly with her left hand. Review of systems brought out the fact that she had had infrequent frontal headaches and slight exertional dyspnea without chest pain or ankle edema.

Examination on admission revealed a deeply stuporous, obese, white female lying on a stretcher with her head and eyes turned to the left. B/P was 260/160, pulse 120, respirations 18 and irregular, and temperature 99°F. The lungs were clear. The PMI was in the left sixth intercostal space at the anterior axillary line. There was a gallop rhythm and systolic murmur at the apex; A_2 was greater than P_2. The abdomen was distended but no masses or organs were felt. Neurological examination showed papilledema bilaterally with venous distention and small flame shaped hemorrhages. The pupils were round and regular, left 3.5 and right 3 mm., and reacted through a small range to light. The right corner of the mouth drooped. The jaws were tightly clenched. The left extremities were flaccid but tone on the right was normal. The corneal reflexes were absent bilaterally and there was no response to painful stimuli. The tendon reflexes were normal on the right and slightly hyperactive on the left. The response to plantar stimulation was equivocal on the right and extensor on the left.

Course: Shortly after admission the patient had a convulsion, the onset of which was not seen but when first noticed she was having tonic and clonic movements of the right side which spread to the left and became generalized. She was given intramuscular paraldehyde and the convulsion was controlled. On the day after admission it was noted that she was less stuporous, mumbled occasionally and responded to painful stimuli over the right side but not the left, the right extremities were moved voluntarily, the left arm being flaccid and the left leg hypotonic. On the third day she had recovered to a point where she recognized her sister and knew that she was in a hospital but was otherwise confused. There was a left lower facial weakness and though she held the left arm in a hemiplegic position, she was able to move it a little. The pupils reacted to light. On the fourth day she was alert and oriented. It was noted that there was little if any increase in tone of the left arm though she complained of stiffness therein. Left Chaddock, Babinski and Hoffman signs were positive. She did not appreciate heat and cold over the left leg. B.P. continued to run about 220/130. On the seventh day a coarse nystagmus was noted on gaze to the right with none on left gaze. She noted cold and pain symmetrically on the face but not on the left forearm. The

same was true for the lower left extremity. There were plantar reversals on the left with markedly hyperactive deep reflexes and decreased tone on the left. She was oriented. On the eighth day she was discharged.

Laboratory Data:

Spinal fluid:	Init. Press.	CC. off	Final Press.	WBC	RBC	Prot.	Cl.	Wass.
9-15	490	15	290	1 poly.	10	75	696	0
9-16	210	12	100	11 poly.	9	83	714	
				3 lym.				
9-20	195	12	120	1 lym.	2	53		

Blood:	Hgb.	RBC	WBC	Neutrophiles	Lymphocytes
9-15	12.5		9,600		
9-17		3.84	21,500	78	22
9-18	13.5	3.76	10,500		

BUN on 9-16 was 22 mg. %, on 9-17—32 mg. %, on 9-22—12 mg. %.

Urine:	Reaction	Spec. Grav.	Albumin	RBC	Casts occ. course granular casts
9-15	6.5	1.010	+++—++++	0	
9-17	7	1.012	+++	occ.	0
9-18	7	1.012	+++	occ.	0

Concentration and Dilution test: 9-20 was conc. 1.018 dil. 1.004;

PSP excretion: 15 min.—20%; 30 min.—25%; 1 hr.—35%; 2 hr.—45%.

Second admission was January 22, 1946. On that night after she had eaten a large meal her husband noted that she was staring to the left and would not answer questions. Soon after being put to bed she had a generalized convulsion and vomited. One hour later she was brought to the Receiving Ward comatose, vomiting. Her head and eyes were turned to the left. The pupils were 1½ mm. and did not react to light. The left arm was groping and spastic with the hand tightly closed. There was spasm of the right upper extremity. The left lower was extended, spastic with a spontaneous Babinski; right spastic with negative Babinski. Deep reflexes were three plus on the right and four plus on the left. B.P. was 260/140, P 120 (irregular, R 30, and stertorous, T 98.9 rectal. She was given 5 cc. of 50% magnesium sulfate but continued downhill and died 17 hours after admission.

Laboratory Data: CSF: Pressure not noted, fluid grossly bloody. BUN 18.

DIFFERENTIAL DIAGNOSIS:

Dr. Richard Vilter: The problems which are presented for discussion in this case are: (1) The nature of, and (2) the precipitating etiologic factors for the cerebral episodes which led to this patient's death. Her background was one of hypertension for several years; headaches, which, though not described, probably were migraine-like and accentuated by her hypertension; dyspnea, probably due to hypertensive left ventricular hypertrophy and failure; and a "stroke" which, because of its mildness and the rapid, though incomplete, improvement which the patient made, sounds like cerebral thrombosis—actually an area of local ischemia and softening in relation to which a thrombus is seldom found.

With this background the most positive type of evidence would be needed to lead me from a diagnosis of hypertensive and arteriosclerotic cerebro-vascular disease as the fundamental etiology behind her subsequent convulsive episodes. Evidence to the contrary is completely lacking. There is no evidence of luetic infection, nor of primary or metastatic brain tumor, the secondary contenders for recognition as etiologic agents when middle aged persons begin to experience convulsions. There is ample evidence from the physical examination that this patient had severe hypertension in the malignant or accelerated phase, severe enough to seriously hamper her cerebral circulation. On physical examination, she had severe systolic and diastolic hypertension, cardiac hypertrophy, gallop rhythm, and advanced hypertensive neuroretinopathy associated with considerable diminution in renal function but without urea retention.

The etiology of the hypertension can be established by deduction with only reasonable assurance. It had the clinical characteristics of malignant hypertension as already stated, but this does not help to establish etiology since nephritic (glomerulo or pyelonephritis) as well as primary arteriolosclerotic vascular disease and periarteritis nodosa may end with this clinical

syndrome. Even hypertension due to hormonal causes — pheochromocytoma — may end in the same fashion. I select essential, primary vascular, or arteriolosclerotic hypertension in the malignant phase as most likely for the following reasons: (1) The patient has had no previous history of renal disease, and (2) has had very high systolic and diastolic hypertension for some time, and severe vascular lesions in eyegrounds, brain, and probably heart out of proportion to the severity of the clinically demonstrable renal lesions or renal failure. In the absence of urine cultures, I cannot satisfactorily rule out chronic pyelonephritis and in the absence of pyelograms or palpatory evidence, I cannot completely eliminate unilateral renal anomalies. They are, however, as unlikely as the rarer vascular diseases, periarteritis nodosa, polycythemia vera and Buerger's disease, for which no suggestive evidence is given in the protocol.

The nature of the cerebral episodes is a bit more difficult. Hypertensive encephalopathy is probably the most common cause of convulsions in such a patient. However, the fact that the stupor continued over a period of days and the signs of a localized lesion persisted up to the time of discharge rule out hypertensive encephalopathy — temporary spasm of cerebral vessels, ischemia, edema and multiple tiny areas of softening, signs of which disappear over the course of several days.

Embolus is unlikely since we have no known mural thrombus, endocarditis or fibrillatory heart from which an embolus might have arisen. Cerebral thrombus, leading to a much larger area of ischemia and softening is a good possibility. As in this patient, the onset is usually sudden, convulsions may occur and recovery of consciousness and improvement in function usually occurs fairly rapidly so that the patient may be recovered sufficiently for discharge eight days after admission. However, I feel that the severity of the convulsions, the very high spinal fluid pressure which was maintained above normal for at least twenty-four hours, the high protein, the few RBC in the first tap and the appearance of a few polys in the fluid the next day suggest that the patient had an encapsulated hemorrhage on the right side. This lesion probably involved the posterior limb of the internal capsule, the parietal lobe radiations to the thalamus, possibly areas of the thalamus itself and probably parts of the basal ganglia, particularly the corpus striatum. I would be more certain of the latter localization if I knew that flaccidity persisted for several months or more after discharge. These areas are all supplied by the right middle cerebral artery. At first there was marked edema of the brain even on the left side (see right sided signs), but this edema cleared rapidly, the patient recovered consciousness and was left with a left sided flaccid hemiparesis which may or may not have become spastic later on.

I would interpret the elevated white cell count as evidence that the patient developed hypostatic pneumonia after her convulsions, and the moderate elevation of the B.N.N. as due to renal congestion and insufficiency temporarily produced by cardiac insufficiency, the result of the convulsions and diffuse vascular disease.

The second cerebral episode in January, 1946, is obviously a large hemorrhage which broke into the ventricle. The constricted pupils suggest that there were smaller areas of hemorrhage in the pons and probably also in other parts of the brain stem.

DISCUSSION

Dr. Milton Rosenbaum: From the protocol, I gathered that the outstanding characteristics of her second attack (first admission to the hospital) were sudden onset with convulsions, coma, choked disc and increased cerebral spinal fluid pressure. I was not impressed with the evidence of progression of neurological findings during that admission, and it may well be that practically all the neurological findings noted were present before her second attack. It is unfortunate that there were no notes on the condition of the discs at discharge, but inasmuch as the cerebral spinal fluid pressure dropped, I would assume the choking of the discs subsided. The picture of sudden onset of coma, convulsions, choked discs, high cerebral spinal fluid pressure in the presence of clear

spinal fluid, and the absence of any new focal neurological findings plus the rather quick recovery, represents a classical example of an acute bout of hypertensive encephalopathy or the so-called "hypertensive crisis." Such episodes are commonly seen in the course of chronic hypertensive encephalopathy. I believe that the acute hypertensive encephalopathy represented the main central nervous system pathology in her first admission.

Dr. Vilter: What would you call a situation in a patient with known hypertension who has convulsions and examination reveals choked discs but the spinal fluid pressure and other findings are all normal?

Dr. Rosenbaum: In such an instance, the choked disc is not due to increased cerebral spinal fluid pressure and the changes in the discs are part of an associated hypertensive retinopathy. In this patient the choked discs were due to increased cerebral spinal fluid pressure and were associated with the acute hypertensive encephalopathy.

Dr. Vilter's Diagnosis

1. Essential (vascular) hypertension in the malignant phase.
2. Hypertensive neuroretinopathy and encephalopathy.
3. Thrombosis (softening) and hemorrhage, right middle cerebral artery.
4. Terminal rupture of a hemorrhage into the ventricles.
5. Cardiac hypertrophy.
6. Arteriolonephrosclerosis.

Clinical Diagnosis

Hypertensive encephalopathy.
Massive cerebral hemorrhage.

Pathological Diagnosis

1. Massive intracerebral hemorrhage (old and recent).
2. Hypertensive cerebral swelling.

DISCUSSION OF PATHOLOGY

Dr. I. Mark Scheinker: On gross examination of the brain the gyri were flattened and the sulci narrowed. There was an uncal herniation on the left and a suggestion of a bilateral cerebellar pressure cone. The vessels of the circle of Willis showed a slight degree of sclerosis and were normally distributed.

Coronal sections through both hemispheres revealed a large area of massive intracerebral hemorrhage measuring up to 3.5 cms. in diameter and involving the later portion of the left basal ganglia with partial transection of the left internal capsule. (Fig. 1.)

In addition to the recent hemorrhage on the left, there was evidence of a large cystic cavity within the right basal ganglia occupying the putamen and the white matter of the island of Reil; it was filled with greyish-brown-yellow necrotic material and with a small amount of a hemorrhagic fluid.

Mesially there was a narrow zone of linear softening involving the lateral portion of the putamen and of the internal capsule on the right. (Fig. 1.)

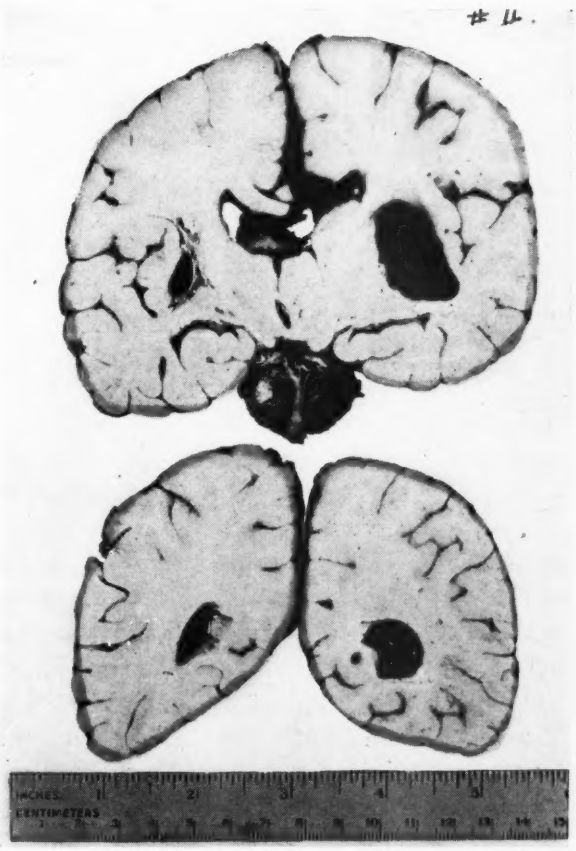

Figure 1.

Cerebral section through both hemispheres. Note the linear softening and the encapsulated old hemorrhage involving the right basal ganglia and the recent massive hemorrhage in the region of the left putamen.

The central white matter of both hemispheres showed gross findings characteristic of cerebral swelling. The left lateral ven-

tricle was slightly compressed and harbored clotted blood. The third ventricle showed a marked shift to the right.

The *microscopic* examination of sections taken from the left basal ganglia disclosed findings typical of a recent massive hemorrhage. There were numerous coalescent perivenous hemorrhages and venous changes characteristic of hypertensive brain disease.[1]

Sections taken from the right basal ganglia revealed a large cavity surrounded by a dense network of glial fibers and numerous macrophages which harbored blood pigment. There is little doubt that these findings represent the picture of a "healed" encapsulated hemorrhage. Immediately adjacent to the cavity was a large zone of softening involving the lateral portion of the right internal capsule. The entire parenchyma appeared destroyed and replaced by a large number of gitter cells. Most of the capillaries and arterioles displayed findings characteristic of hypertensive arteriolopathy.[2]

Sections taken from the white matter of both hemispheres revealed a spongy appearance of the tissue associated with congestion and stasis of the smaller veins and capillaries, thus representing findings characteristic of the second stage of cerebral swelling.

Clinicopathologic Correlations:

This case was selected for the purpose of demonstrating various pathologic syndromes characteristic of hypertensive brain disease and to determine the correlations between the clinical manifestations and the underlying histopathologic findings.

As already mentioned in the clinical discussion, the patient's cerebral symptoms manifested themselves in the form of three consecutive episodes. What is their underlying pathology?

According to the history the patient had her first "stroke" in January 1945 during which she was not comatose, and which resulted in transient facial asymmetry and a weakness of her left upper and lower extremities. The underlying pathology responsible for this episode is seen in Fig. 1 in form of a linear softening involving the lateral portion of the right internal capsule. The transient nature of the symptoms of paralysis might be explained by the preservation of the mesial portion of the fibers of the internal capsule.

The second episode, nine months later (October 15, 1945), was characterized by rapid succession of epileptic seizures followed by stupor. The most prominent clinical findings were bilateral papilledema and a spinal fluid pressure of 490 mm. of water. Not less characteristic for this episode was the relatively rapid recovery from the state of stupor in association with a return of the markedly elevated spinal fluid pressure within a period of about five days from 490 to 190 mm. of water.

There is little doubt that we are dealing here with an acute syndrome frequently referred to in the literature as "vascular crisis" or "hypertensive encephalopathy." This syndrome was recently described in a series of twelve cases under the heading of "hypertensive brain swelling." The underlying pathology in all cases studied consisted in a diffuse swelling of the cerebral substance. The early stage of the histopathologic changes is characterized by swelling of all constituent elements *i.e.* the nervous parenchyma. These early changes are, as a rule, reversible in nature and thus explain the rapid subsiding of the clinical symptoms and signs of increased intracranial pressure. The diffuse cerebral swelling may be occasionally associated with small areas of massive hemorrhages. The microscopic findings characteristic of diffuse cerebral swelling found on sections taken from the central white matter and the hemorrhagic cavity involving the right basal ganglia (Fig. 1) thus form the underlying pathology for the second episode of the case under discussion.

Finally the third episode resulting in death can be attributed to the recent massive hemorrhage found in the *left* basal ganglia with rupture into the ventricular system.

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Psychotherapy in Ambulatory Schizophrenia

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The purpose of this paper is to present the use of a supportive relationship between patient and physician as a basis of therapy in ambulatory schizophrenia, a term applied to patients in this diagnostic category not requiring hospitalization. A supportive relationship is frequently started with schizophrenic patients by therapists, consciously or unconsciously, during the period of hospitalization, but it usually terminates upon discharge. The patient, after recovery, frequently returns to the same environmental setting in which the breakdown occurred and unless he is able to establish a personal relationship with a lay person or a therapist, he frequently finds himself faced with the same problems which had previously overwhelmed him. The supportive relationship is used in psychiatry as the basis of treatment in all types of cases. However, its use in ambulatory schizophrenia is somewhat different and the problem it presents is probably overlooked or avoided.

Many of the early concepts and approaches to the treatment of mental illness were formulated on a somatic basis and these ideas still infiltrate our present thinking. I do not wish to give the impression that I consider organic factors unimportant in our present approach to the treatment of mental illness. Together with the basic elements of personality and environment, they are essential to an understanding of the total situation in any given case, but their importance is occasionally overemphasized. It is generally conceded in our present day thinking that schizophrenia for all practical purposes is functional in origin and the widely accepted diagnosis of dementia praecox with its emphasis on prognosis frequently discourages therapy. The handling of these cases often is limited to custodial care and does not extend to treatment. Nevertheless, according to Noble,[1] many hospitalized cases of schizophrenia are sufficiently improved to make an acceptable social adjustment without having had any intensive psychotherapy. It is his opinion that such recoveries are due largely to contacts with hospital personnel, including nurses, attendants, and others comparatively untrained in psychiatry. The security obtained by the patient from such personal experiences is a valuable aid in overcoming his psychotic life orientation.

This idea fits in with the views Alexander[2] recently expressed on psychotherapy. He feels that the understanding of an emotional disturbance is partly intuitive and partly scientific. The laity unconsciously practice an intuitive psychotherapy in trying to comfort someone who is upset. This element of psychotherapy represents a sympathetic acceptance and tolerance of the individual and is an important but frequently disregarded element in scientific psychotherapy.

Many characteristics of schizophrenia make a supportive relationship difficult as compared with treatment in other groups of mental illness. Schizophrenia is vaguely defined and there are no fixed or dependable pathognomonic signs except in advanced cases. According to Campbell,[3] the outstanding characteristic of such individuals is the estrangement from what is generally considered as normal in their emotionality, their motivations, and their outlook on life which has a bizarre and not directly comprehensible quality. As such, they have become a forgotten race, rejected by society, poorly tolerated by their own families, and usually found maintaining a tenuous equilibrium in quiet desperation. It has been frequently estimated there are more such psychotic, or potentially psychotic cases living in the community than in mental institutions. When they come to the attention of a psychiatrist, they are too often labeled, stigmatized, and pronounced incapable of community living without any further attempt to understand their problem.

The therapeutic approach to such cases is

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difficult, and the following views of Fromm-Reichmann[4] regarding approach and therapy, in my opinion, are very useful in dealing with any stage of the schizophrenic process. She believes that these individuals have usually suffered serious emotional traumatic experiences in early infancy. Psychologically, this seems to provide an anaphylactic basis for the sensitizing effect of later experiences. Hence, many experiences which would mean little to a healthy person and not too much to a psychoneurotic, cause great pain and suffering to the schizophrenic personality. The hypersensitive schizophrenic has had difficulty in his interpersonal relationship from the start, and his escape from reality has been into an autistic world of his own.

In actual treatment, the physician's approach becomes a threat to the autistic security and this is the most likely reason for the long test period which the patient requires before he can overcome his suspicions and anxiety about the friendship and consideration offered by the therapist. It is also impossible to know what time means to a schizophrenic, and hence it is futile to try to judge such a patient's progress by ordinary time standards. They cannot be hurried, and nothing matters in the successful therapy of this type of case except that the therapist permit the patient to feel comfortable and secure enough to give up his defensive narcissistic isolation and to use the physician for resuming contact with the world.

Problems of transference which arise are different in nature from those encountered in the treatment of other types of mental illness and must be carefully handled as any failure on the part of the therapist may result in a serious disappointment to the patient. From the problem this type of psychotherapy presents, many therapists are inclined to think that schizophrenics cannot be treated because they are too narcissistic to develop a therapeutic relationship. According to Fromm-Reichmann[4] this is probably not the fault of the schizophrenic but rather a lack of empathy on the part of the therapist. Successful therapy is primarily dependent upon the acceptance of the patient by the therapist as another human being. If he considers the patient a strange creature of another world, which is a common reaction, he cannot treat him. However if he realizes that the difference between himself and the schizophrenic is only one of degree and not of kind, he will be able to identify himself sufficiently with the patient to understand and accept his emotional reactions without becoming repelled. The schizophrenic and the therapist are people with vastly different degrees of personality development, and each have different means of expressing and orienting themselves. Little is known about the language of the unconscious of the schizophrenic, and our access to it is blocked by the very process of our own adjustment to a world which the schizophrenic has relinquished.

Although Fromm-Reichmann's general concept of the schizophrenic process has been followed in working with such patients in the Colorado Psychopathic Out-patient Department, there are important differences in our treatment approach, particularly in terms of depth, intensity, and goal. Our treatment method is based essentially on the concept that the schizophrenic is a lonely and isolated individual looking for acceptance, tolerance, and understanding not generally available to him in his ordinary social relationships. Patients are usually seen once a week or less, depending upon their tolerance at any particular time. They are given considerable leeway in determining the frequency of interviews and in establishing their own therapeutic framework within the interviews. It is as if we are saying to the schizophrenic, "Here is a relationship which we are offering to you indefinitely on your own terms to use as you see best. We know you have reason to be suspicious of people, and we know you will not have very much faith in us for a long time, but we are willing to stand by and give you as much time as you want and need to test us." We convey this information more through attitude than through statement.

The emphasis in this paper is on the application of this type of therapy to patients who are able to use it as a prop to maintain their limited social adjustment. Before pre-

senting illustrative cases, I wish to comment about their selection. Cases were chosen in which there was little doubt as to diagnosis. Therefore, they were of the more advanced type, and the degree of improvement shown was not as startling as in those where the diagnosis was borderline but definitely comparable. In reviewing the cases, an interesting finding in relation to the theme of this paper became evident. I found I had unconsciously left out of the records much of the schizophrenic content in each case. The most likely explanation would seem to be my own rejection of such material in order to be able to accept the patient. If it had been otherwise, I do not believe I would have been successful with this type of psychotherapy in the treatment of the ambulatory schizophrenic.

Case Histories

Case 1. E. M., single, white male, age 21, first became known to the therapist as a house case in April 1944. He was 19 at that time and had been admitted as a result of an acute schizophrenic episode. He was a tall, thin, adolescent boy of average intelligence. He had a marked acne of the face. He was a sensitive, self-conscious, dependent person with strong feelings of inferiority, compensating by aggressive, dominating behavior. He was irritable, demanding, and made a nuisance of himself about the ward. His emotional reactions were inappropriate. His stream of talk was overproductive, and the content rambling and dissociated. His thinking was characterized by strong persecutory and expansive trends. He considered his step-mother responsible for all his difficulties, had ideas of reference about fellow employees where he had recently worked, and at the same time, boasted about his success in making friends. He was given insulin shock to help him establish a better rapport in psychotherapy, and a supportive relationship was gradually established through seeing the patient regularly. He improved gradually and was discharged after three months.

He was not heard from again until November 1945. At this time, he himself contacted the therapist seeking support with the immediate problem of a difficulty he had gotten into with his parents over a car he had purchased. He had been making only a borderline adjustment, and this new conflict with his parents had been sufficient to make him fear that he would lose control over his thinking and feeling. The patient chose to come to the Colorado Psychopathic Out-patient Department for a few weekly interviews and through the already established relationship, he was soon able to work through this immediate problem. He terminated the interviews suddenly without informing the therapist and nothing was heard from him again until July 1946. This time the patient's stepmother contacted the therapist. It was learned that he had become upset over disharmony within the family and was again showing abnormal behavior. His stepmother was of the opinion that he might have to be readmitted to the hospital.

The patient came to the clinic the following day with his father and was in a moderately excited state. He was rather irritable and his talk was confused. A supportive relationship was readily reestablished, and in the discussion patient remarked that it seemed to him that the therapist was the only friend he had. The patient decided to see the therapist for a few weekly interviews as before. This time he was more dependable and after a few weeks felt confident enough to carry on alone. He was uninterested in any continued plan of interviews, and at the time of his last visit, he was told that he could make another appointment whenever he felt it necessary.

Case 2. W. D., single, white male, age 29, had been known to the Colorado Psychopathic Hospital for a number of years. He has had several admissions to our hospital and to the State Hospital at Pueblo since July 1938. The diagnosis on each admission to Colorado Psychopathic Hospital was schizophrenia. He was recently paroled from Pueblo to his parents. (Oct. 1945.) After being home for a while, he decided to come to Denver to work, and through arrangements made by the State Hospital, it was planned to follow him in the Out-patient Department. He had come to Denver a few days before he first saw the therapist in January 1946 with inadequate plans and

only a small financial reserve. He had met with repeated failure in trying to establish himself and was discouraged and desperate.

He was an odd appearing, immaturely dressed, blond, young man of average stature walking with a marked limp, the result of an old injury, which necessitated the use of an artificial foot. He was unable to discuss his family or his past because of the associated anxiety, and the information as to his past history was obtained from hospital records. He was a sensitive, self-conscious individual and had experienced difficulty in interpersonal relationships for many years. He seemed to become more secure when he began to realize someone was taking an personal interest in his welfare. He was helped to obtain a job and a suitable place to live. He was seen frequently at first but gradually made his own plans for less frequent interviews.

He began to accomplish things on his own without showing any startling objective improvement during the interviews. He seemed to be coming to the clinic to make sure that it was still there, and that the therapist was still there. Gradually, he became happier and more contented with his circumstances, started a savings account with the definite goal in mind of buying a new artificial foot, and began to extend his limited social outlets. After several months, the patient was able to bring up superficial problems for the therapist's consideration, discussing such things as why he had been given insulin shock in the State Hospital. This was something he could never fully understand. About this time, through no fault of his own, he lost his job but was able to get himself a better one without either the therapist's or clinic's assistance. This circumstance gave him a considerable lift in pride and self-respect. To date he has continued to make this acceptable but limited adjustment.

Case 3. N. T., single, middle aged white female, had been coming to the hospital for a number of years mainly for the purpose of having a sedative prescription refilled. She had not had opportunity to see a physician regularly on a psychotherapeutic basis. This medication apparently represented the only security she knew, as any prospect of its denial was sufficient to make her feel on the verge of a panic. She was first seen by the therapist in the Out-patient Department in October 1945. She came because she was unable to have the prescription refilled through the usual source. She was suspicious of the hospital and therapist mainly because of past experiences when attempts had been made to have her committed.

She was a sensitive, self-conscious, insecure, lonely, meticulous person presenting a good appearance. She was extremely tense, anxious, and uneasy in talking with the therapist. She was irritable and showed a need to dominate the interviews. On these occasions, the therapist frequently said nothing remaining passive and sympathetic. She was extremely paranoid and frequently talked about her hatred for several local psychiatrists whom she blamed for causing her present condition. She also talked about the therapist in this way and gained some satisfaction from releasing her hostile feeling toward him. She had never been able to get along with her family upon whom she was completely dependent while living alone in an apartment. This was also a continuous problem as she was unable to remain in her room during the day since the loneliness of looking at the four walls was too frightening. In trying to find a solution, she would get up and leave very early in order to avoid any contact with others in the apartment. She found that this was of no benefit as it seemed to her, there was always someone present to purposely cause her annoyance.

To begin with, she kept a few appointments and terminated without giving any explanation. She was not heard from again until April 1946 when the clinic became the only source through which she could get her prescription refilled. At this time, it was learned she had not kept her previous appointments as she thought the therapist had been testing her for hallucinations. She had reached this conclusion from hearing people talking in the hall during the interviews. She thought the therapist had purposely made these arrangements for her benefit. It was not possible to follow the usual routine of making appointments, as patient was al-

ways becoming involved in a paranoid way with the secretaries who answered the telephone. She would usually become so upset by such an experience that she felt compelled to go home and masturbate, which was again terribly distressing. It was finally arranged that she would come to the hospital during clinic hours, and the therapist would personally see to it that her prescription was taken care of promptly. She was also offered the privilege of talking with the therapist if she ever felt the need to do so. She gradually took advantage of this opportunity, as she returned on an average of every ten to fourteen days. She gradually began to feel better and was more at ease during the interviews. She occasionally continued to accuse the therapist of testing her for hallucinations, but she did not seem too upset by it. Such circumstances had no apparent effect on the superficial relationship which had been established. It was not possible to check on her adjustment outside of the clinic, but she was continuing to show an objective and subjective improvement in the interviews through August 1946.

Conclusion

A secure relationship between patient and physician is essential in psychotherapy. The problem of utilizing this therapeutic tool in treatment of patients of the schizophrenic group is somewhat different and more difficult than in other groups of mental illness. Its successful use is dependent upon the attitude of the therapist in being able to accept the patient as a fellow human being rather than as a creature of a strange world. This is a difficult accomplishment as the therapist is often unconsciously blocked by the very process of his own adjustment to a world which the schizophrenic has relinquished. This method of psychotherapy is derived from the psychoanalytic approach, but there are important differences, particularly in terms of depth, intensity, and goal of treatment. Our treatment method is based essentially on the concept that the schizophrenic is a lonely and isolated individual who is looking for acceptance, tolerance, and understanding not generally available to him in his ordinary social relationships. It is frequently surprising how much patients of this group are able to benefit from the successful use of this method of psychotherapy.

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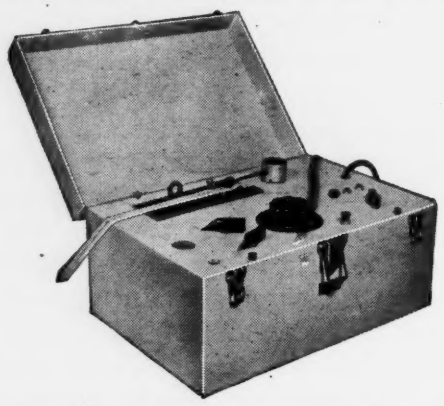

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